

P27269.A10

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of  
Shuichi Yatabe

Docket No. P27269

Confirmation No. 6237

Serial No.: 10/600,834

Group Art Unit: 3683

Filed: June 23, 2003

Examiner: King, Bradley T.

For: VACUUM PRESSURE BOOSTER

**SUPPLEMENTAL APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

Commissioner for Patents  
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Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Sir:

The instant Supplemental Appeal Brief is responsive to the Notice of Non-Compliant Appeal Brief mailed on January 2, 2007. Appellant has revised the Status of Amendments (Section IV) to refer the Amendment filed June 8, 2006 and corrected claim 14 in the Claims Appendix consistent with the Notice of Non-Compliant Appeal Brief mailed on January 2, 2007.

This appeal is from the Examiner's final rejection of claims 1-19 and 21 as set forth in the Final Office Action of March 8, 2006. A Notice of Appeal and a Request for Pre-Appeal Brief Review, in response to the March 8, 2006 Final Office Action, were filed on August 4, 2006.

No additional fee is believed to be required for filing the instant Supplemental Appeal Brief. However, if for any reason a necessary fee is required for consideration of the instant paper, authorization is hereby given to charge the fee for the Appeal Brief and any necessary extension of time fees to Deposit Account No. 19-0089.

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**(I) REAL PARTY IN INTEREST**

The real party in interest is Nissin Kogyo Co., Ltd. by an assignment recorded in the U.S. Patent and Trademark Office on September 16, 2003, at Reel 014508 and Fame 0606.

**(II) RELATED APPEALS AND INTERFERENCES**

No related appeals and/or interferences are pending.

**(III) STATUS OF THE CLAIMS**

Claims 1-21 are pending with claims 1-19 and 21 standing finally rejected and with claim 20 being allowed. Claims 1-19 and 21 are the subject of this appeal. The claims in issue are attached in the "Claims Appendix". All amendments to the claims have been entered.

**(IV) STATUS OF THE AMENDMENTS**

A Notice of Appeal and a Request for Pre-Appeal Brief Review were filed on August 4, 2006 in response to the March 8, 2006 Final Office Action. A Rule 1.116 Amendment was filed on June 8, 2006. An Advisory Action dated June 22, 2006 indicated that the Rule 1.116 Amendment filed on June 8, 2006 would be entered for purposes of appeal. No other response was filed following the Final Office Action. Appellant submits that no amendments after final have been filed and that all amendments to the claims have been entered.

**(V) SUMMARY OF THE CLAIMED SUBJECT MATTER**

**A. The Claimed Subject Matter**

**1. INDEPENDENT CLAIM 1**

With reference to the Detailed Description section and, in particular, page 26, line 13 to page 29, line 8 of the instant application and to Figs. 1 and 6, and by way of non-limiting example, the invention is directed to a vacuum pressure booster comprising a booster shell (1), a booster piston (4) accommodated inside the booster shell (1) and partitioning the interior of the booster shell (1) into a front side vacuum pressure chamber (2) communicating with a vacuum pressure source (V) and a rear side operation chamber (3). See page 11, lines 1-24 of the specification. A valve cylinder (10) communicates with the booster piston (4). See page 12, lines 8-20 of the specification. The valve cylinder (10) includes a valve piston (18) fitted into the valve cylinder (10) to be slidable in a forward and rearward direction of the valve cylinder. See page 12, lines 21-22 of the specification. An input rod (20) couples with the valve piston (18) at a front end thereof. See page 12, lines 16-17 of the specification. A control valve (38) switches communication (see page 12, lines 17-20 of the specification) of the operation chamber (3) with the vacuum pressure chamber (2) and with air in accordance with a forward and rearward movement of the input rod (20) between the valve piston (18) and the valve cylinder (10). An input return spring (41) pushes the input rod (20) backward. See Fig. 6 and page 21, lines 7-10 of the specification. The control valve (38) includes an annular vacuum pressure introducing

valve seat (30) formed in the valve cylinder (10), an atmosphere introducing valve seat (31) formed in the valve piston (18) and arranged inside the vacuum pressure introducing valve seat (31), a valve body (34) including an annular attaching bead portion (34b) airtightly attached (via seal lip 37 and see page 23, lines 16-23) to the valve cylinder (10), an expansion cylinder portion (34c) extending in the axial direction from the attaching bead portion (34b), an annular valve portion (34a) communicating with a forward end portion of the expansion cylinder portion (34c) and opposed to the vacuum pressure introducing valve seat (30) and the atmosphere introducing valve seat (31) so as to seat thereon, and a valve spring (36) for pushing the valve portion (34a) so as to seat on the vacuum pressure introducing valve seat (30) and the atmosphere introducing valve seat (31). See Fig. 6. A first port (28) communicating with the vacuum pressure chamber (2) is opened on the outer circumferential side of the vacuum pressure introducing valve seat (30). See Fig. 6. A second port (29) communicating with the operation chamber (3) is opened between the vacuum pressure introducing valve seat (30) and the atmosphere introducing valve seat (31) in such a manner that the inner circumferential side of the valve portion (34a) is communicated with the atmosphere. See page 17, lines 12-15 of the specification. The attaching bead portion (34b) is tightly held between a pair of cylindrical holding portions (35Ab and 35Bb) formed in a pair of valve holders (35A and 35B) attached to the valve cylinder (10) and engaging an inner circumferential face of the valve cylinder (10). See page 25, line 18 to page 26, line 7 of the specification. An annular recess portion (50)

and an annular protruding portion (51) of the pair of cylinder holding portions are elastically engaged with each other. See page 26, lines 21-25 of the specification. A diameter of the cylindrical holding portions (35Ab and 35Bb) is smaller than the inner diameter of the valve cylinder (10). See Fig. 6.

## **2. INDEPENDENT CLAIM 19**

With reference to the Detailed Description section and, in particular, page 26, line 13 to page 29, line 8 of the instant application and to Figs. 1 and 6, and by way of non-limiting example, the invention is directed to a vacuum pressure booster comprising a booster shell (1), a booster piston (4) inside the booster shell, and partitioning the interior of the booster shell (1) into a front side vacuum pressure chamber (2) communicating with a vacuum pressure source (V) and a rear side operation chamber (3). See page 11, lines 1-24 of the specification. A valve cylinder (10) communicates with the booster piston (4). See page 12, lines 8-20 of the specification. The valve cylinder (10) includes a valve piston (18) fitted into the valve cylinder (10) to be slidable in a forward and rearward direction of the valve cylinder (10). See page 12, lines 21-22. An input rod (20) couples with (see page 12, lines 16-17 of the specification) the valve piston (18) at a front end thereof. A control valve (38) switches communication (see page 12, lines 17-20 of the specification) of the operation chamber (3) with the vacuum pressure chamber (2) and with air in accordance with a forward and rearward movement of the input rod (20) between the valve piston (18) and the valve cylinder (10). An input return spring (41) pushes the input rod (20) backward. See Fig. 6 and

page 21, lines 7-10 of the specification. The control valve (38) includes an annular vacuum pressure introducing valve seat (30) formed in the valve cylinder (10), an atmosphere introducing valve seat (31) formed in the valve piston (18) and arranged inside the vacuum pressure introducing valve seat (31), a valve body (34) including an annular attaching bead portion (34b) airtightly attached (via seal lip 37 and see page 23, lines 16-23) to the valve cylinder (10), an expansion cylinder portion (34c) extending in the axial direction from the attaching bead portion (34b), and an annular valve portion (34a) communicating with a forward end portion of the expansion cylinder portion (34c) and opposed to the vacuum pressure introducing valve seat (30) and the atmosphere introducing valve seat (31) so as to seat thereon, and a valve spring (36) for pushing the valve portion (34a) so as to seat on the vacuum pressure introducing valve seat (30) and the atmosphere introducing valve seat (31). See Fig. 6. A first port (28) communicating with the vacuum pressure chamber (2) is opened on the outer circumferential side of the vacuum pressure introducing valve seat (30). See Fig. 6. A second port (29) communicating with the operation chamber (3) is opened between the vacuum pressure introducing valve seat (30) and the atmosphere introducing valve seat (31) in such a manner that the inner circumferential side of the valve portion (34a) is communicated with the atmosphere. See page 17, lines 12-15 of the specification. The attaching bead portion (34b) is tightly held between a pair of cylindrical holding portions (35Ab and 35Bb) formed in a front valve holder (35A) and a rear valve holder (35B). The front valve holder (35A) includes a connecting portion (35Ac) that extends

into a recess (see Fig. 6) of the rear valve holder (35B) having a forward facing open end (see Fig. 6), whereby the connecting portion (35Ac) is positioned between the valve cylinder (10) and an engaging portion (35Bc) of the rear valve holder (35B).

**(VI) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

**Whether claims 19 and 21 are improperly rejected under 35 U.S.C. § 112, 2<sup>nd</sup> Paragraph as being indefinite.**

**Whether claims 1-18 are improperly rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,190,125 to SUZUKI et al.**

**(VII) ARGUMENT RE. 112, 2<sup>nd</sup> PARAGRAPH, REJECTION**

**REJECTION OF INDEPENDENT CLAIM 19 UNDER 35 U.S.C. § 112, 2<sup>ND</sup> PARAGRAPH IS IN ERROR**

The rejection of claim 19 under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph, as being indefinite is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

The Examiner asserts that claim 19 is indefinite because

“[i]t is not clear which element has the ‘forward facing open end’”.

Appellant respectfully disagrees. Fig. 6 of the instant application clearly shows a front valve holder 35A that includes a connecting portion 35Ac which extends into a recess of the rear valve holder 35B. The recess is the reduced diameter portion of the rear valve holder 35B. Fig. 6 clearly shows a gap which forms this recess arranged between the reduced diameter portion of rear valve holder 35B and valve cylinder 10. Fig. 6 also clearly shows that portion 35Ac extends into this recess. Furthermore, since the valve holder 35A has been defined as a “front” valve holder and since the valve



holder 35B has been defined as a "rear" valve holder, Appellant has clearly established forward and rearward directions. Furthermore, Fig. 6 clearly shows that the recess which receives portion 35Ac has a forward facing open end. Indeed, it is apparent from Fig. 6 that this forward open end of the recess allows the rear portion 35Ac of front valve holder 35A to enter into the recess. Thus, it is apparent that one having ordinary skill in the art, having at least reviewed Fig. 6 of the instant application, would understand the claimed invention. Nor has the Examiner demonstrated otherwise.

Because each of the features recited in claim 19 would be understood by one having ordinary skill in the art, Appellant submits that each of the features in claim 19 are clear and are not indefinite.

**REJECTION OF INDEPENDENT CLAIM 21 UNDER 35 U.S.C. § 112, 2<sup>ND</sup> PARAGRAPH IS IN ERROR**

The rejection of claim 21 under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph, as being indefinite is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

The Examiner asserts that claim 21 is indefinite because it is not clear what the meaning is of

"the pair of cylindrical holding portions comprise an annular recess having an open forward end and an annular protruding portion extending rearward into the annular recess from the open forward end, and wherein the annular recess and the annular protruding portion ..."

Appellant respectfully disagrees. Claim 21 has been amended to recite that the pair of cylindrical holding portions comprise an annular recess having an open forward

end and an annular protruding portion extending rearward into the annular recess from the open forward end, and the annular recess and the annular protruding portion comprise inner and outer circumferential surfaces which engage each other. Appellant submits that this claim has been amended consistent with the Examiner's comments and that the Examiner's assertions on indefiniteness should be withdrawn or at least clarified by the Examiner. Each of the features recited in claim 21 are also fully supported in Fig. 6 and one having ordinary skill in the art would have no difficulty understanding the recited features. Furthermore, the Advisory Action of June 22, 2006 indicates that the Amendment was considered and would be entered for purposes of appeal.

#### **(VIII) ARGUMENT RE. 102(b) REJECTION**

**Whether claims 1-18 are improperly rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,190,125 to SUZUKI et al.**

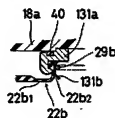
##### **REJECTION OF INDEPENDENT CLAIM 1 UNDER 35 U.S.C. § 102 IS IN ERROR**

The rejection of claim 1 under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,190,125 to SUZUKI et al. is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

In the rejection, the Examiner asserts that Fig. 4 of SUZUKI shows pertinent features related to the claimed invention. For example, the Examiner is of the opinion that Fig. 4 of SUZUKI shows that the attaching bead portion is tightly held between a pair of cylindrical holding portions formed in a pair of valve holders attached to the valve

cylinder and engaging an inner circumferential face of the valve cylinder. Appellant respectfully disagrees and submits that this feature is not disclosed in Fig. 4 of SUZUKI, reproduced below.

**Fig. 4**



Claim 1 recites that the pair of valve holders, which the Examiner has identified as members 131a and 131b, engage an inner circumferential face of the valve cylinder. This is not disclosed in Fig. 4 of SUZUKI. To the contrary, while it is true that Fig. 4 shows two members 131a and 131b, it is clear from Fig. 4 that only member 131a engages an inner circumferential face of the valve cylinder 18a. Member 131b simply does not engage an inner circumferential face of the valve cylinder 18a. As such, it cannot properly be argued that Fig. 4 of SUZUKI discloses or suggests that the attaching bead portion is tightly held between a pair of cylindrical holding portions formed in a pair of valve holders attached to the valve cylinder and engaging an inner circumferential face of the valve cylinder.

The Examiner asserts on page 6 of the Final Office Action that "[t]he claim language does not require that each holder engage the inner face." This assertion is not correct and is contrary to the express language of the claims. Claim 1 clearly states

that the pair of valve holders is attached to the valve cylinder and engages an inner circumferential face of the valve cylinder. This is clearly shown in Fig. 6 which illustrates that portions of both valve holders 35A and 35B engage with the inner circumferential face of the valve cylinder 10. Claim 1 simply cannot properly be read to recite that only one of the members 35A and 35B engages an inner circumferential face of the valve cylinder because claim 1 uses the term "pair". As the Examiner knows, the term "pair" means two, and not one. Thus, the Examiner's argument that this language can be read to recite that only one of the valve holders engages with the valve cylinder is improper and contrary to clear language of the claims.

Furthermore, as shown in Fig. 4, a circular groove is formed on the outer circumference of the first retainer 131a and an O-ring 40 is installed on the circular groove provided in the first retainer 131a. The first retainer 131a is secured in an air-tight manner to the cylindrical portion 18a of the piston body 18 through the O-ring 40 by pressing. Also, Fig. 4 shows a circular ring 131b, provided as a second retainer, secured to the inner circumference of the tubular portion of the first retainer 131a by pressing. However, the first retainer 131a does not include a protruding part, as recited in the claimed invention, nor does the circular ring 131b include a recessed portion, as recited in the claimed invention.

By way of background, Fig. 6 of the instant application shows an annular recess portion 50 arranged on an outer cylindrical circumferential surface of member 35B and an annular protruding portion 51 arranged on an inner circumferential cylindrical surface

of connecting portion 35Ac of member 35A. The connecting portion 35Ac extends into an annular recess of the member 35B which has an open forward end.

Appellant emphasizes that claim 1 clearly recites, for example, that the attaching bead portion is tightly held between a pair of cylindrical holding portions formed in a pair of valve holders attached to the valve cylinder and engaging an inner circumferential face of the valve cylinder. Fig. 4 of SUZUKI, in contrast, provides no engagement between member 131b and the valve cylinder 18a, and instead provides engagement between member 131b and an inner circumferential surface of member 131a. Accordingly, the Examiner must acknowledge that Fig. 4 of SUZUKI fails to disclose, or even suggest, an arrangement wherein a pair of valve holders engages with an inner circumferential face of the valve cylinder.

Additionally, Appellant submits that the configuration of SUZUKI is, by far, more difficult to manufacture and assemble than that of the claimed invention. For example, the recess and protruding portion of the claimed invention allow an easy and simple "snap-like" fit mating, which is elastically engaged. The configuration of the claimed invention also uses less material, which reduces costs. Additionally, the mating of the claimed invention is very secure, used in combination with the remaining features of the claimed invention. In contrast, the configuration of SUZUKI includes more material and would thus be more costly to manufacture. Also, this configuration clearly shows that both of the rings 131a and 131b have smooth surfaces which cannot be equated with nor is it similar to that of the claimed protruding and recess mating portions of the

claimed invention.

Thus, in contrast to SUZUKI, in the claimed invention, the booster includes a valve body which has an annular attaching bead portion 34b airtightly attached to the valve cylinder and an expansion cylinder portion 34c extending in the axial direction from the attaching bead portion. An annular valve portion communicates with a forward end portion of the expansion cylinder portion and is opposed to the vacuum pressure introducing valve seat and the atmosphere introducing valve seat so as to seat thereon. The attaching bead portion is tightly held between a pair of cylindrical holding portions 35Ab and 35Bb formed in a pair of valve holders attached to the valve cylinder. A cylindrical connecting portion 35Ac of the front holder is engaged with an outer circumference of an engaging portion 35Bc of a rear valve holder of the pair of valve holders. An annular recess portion 50 and an annular protruding portion 51 of the pair of cylindrical holding portions are arranged on circumferential surfaces and are elastically engaged with each other. A front valve holder 35A including a connecting portion 35Ac extends into a recess of the rear valve holder 35B having a forward facing open end, whereby the connecting portion 35Ac is positioned between the valve cylinder 10 and an engaging portion 35Bb of the rear valve holder 35B. These features are not shown in the reference applied by the Examiner.

Because the above-noted document fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper reading of SUZUKI renders unpatentable the combination of features recited in at least

independent claim 1.

**REJECTION OF DEPENDENT CLAIM 7 UNDER 35 U.S.C. § 102 IS IN ERROR**

The rejection of claim 7 under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,190,125 to SUZUKI is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Dependent claim 7 depends from claim 1 and further recites, *inter alia*,

... wherein the valve portion is slidably fitted on an inner circumferential face of the valve cylinder ..."

SUZUKI does not disclose this feature. Fig. 6 of the instant application shows valve portion 34a slidably fitted via seal 37 on the inner circumferential surface of the valve cylinder 10. SUZUKI, in contrast, shows no sliding contact or engagement between the valve portion 22 and valve cylinder 18a (see Fig. 5). Nor has the Examiner demonstrated otherwise.

Because the above-noted document fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper reading of SUZUKI renders unpatentable the combination of features recited in at least dependent claim 7.

**REJECTION OF DEPENDENT CLAIM 8 UNDER 35 U.S.C. § 102 IS IN ERROR**

The rejection of claim 8 under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,190,125 to SUZUKI is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Dependent claim 8 depends from claims 1 and 2, and further recites, *inter alia*,

... wherein the valve portion is slidably fitted on an inner circumferential face of the valve cylinder ..."

Again, SUZUKI does not disclose this feature. Fig. 6 of the instant application shows valve portion 34a slidably fitted via seal 37 on the inner circumferential surface of the valve cylinder 10. SUZUKI, in contrast, shows no sliding contact or engagement between the valve portion 22 and valve cylinder 18a (see Fig. 5). Nor has the Examiner demonstrated otherwise.

Because the above-noted document fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper reading of SUZUKI renders unpatentable the combination of features recited in at least dependent claim 8.

**REJECTION OF DEPENDENT CLAIM 9 UNDER 35 U.S.C. § 102 IS IN ERROR**

The rejection of claim 9 under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,190,125 to SUZUKI is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Dependent claim 9 depends from claims 1 and 3, and further recites, *inter alia*,

... wherein the valve portion is slidably fitted on an inner circumferential face of the valve cylinder ..."

Again, SUZUKI does not disclose this feature. Fig. 6 of the instant application shows valve portion 34a slidably fitted via seal 37 on the inner circumferential surface of the valve cylinder 10. SUZUKI, in contrast, shows no sliding contact or engagement



between the valve portion 22 and valve cylinder 18a (see Fig. 5). Nor has the Examiner demonstrated otherwise.

Because the above-noted document fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper reading of SUZUKI renders unpatentable the combination of features recited in at least dependent claim 9.

**REJECTION OF DEPENDENT CLAIM 10 UNDER 35 U.S.C. § 102 IS IN ERROR**

The rejection of claim 10 under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,190,125 to SUZUKI is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Dependent claim 10 depends from claims 1, 2 and 4, and further recites, *inter alia*,

... wherein the valve portion is slidably fitted on an inner circumferential face of the valve cylinder ..."

Again, SUZUKI does not disclose this feature. Fig. 6 of the instant application shows valve portion 34a slidably fitted via seal 37 on the inner circumferential surface of the valve cylinder 10. SUZUKI, in contrast, shows no sliding contact or engagement between the valve portion 22 and valve cylinder 18a (see Fig. 5). Nor has the Examiner demonstrated otherwise.

Because the above-noted document fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper reading of SUZUKI renders unpatentable the combination of features recited in at least

dependent claim 10.

**REJECTION OF DEPENDENT CLAIM 11 UNDER 35 U.S.C. § 102 IS IN ERROR**

The rejection of claim 11 under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,190,125 to SUZUKI is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Dependent claim 11 depends from claims 1, 3 and 5, and further recites, *inter alia*,

... wherein the valve portion is slidably fitted on an inner circumferential face of the valve cylinder ..."

Again, SUZUKI does not disclose this feature. Fig. 6 of the instant application shows valve portion 34a slidably fitted via seal 37 on the inner circumferential surface of the valve cylinder 10. SUZUKI, in contrast, shows no sliding contact or engagement between the valve portion 22 and valve cylinder 18a (see Fig. 5). Nor has the Examiner demonstrated otherwise.

Because the above-noted document fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper reading of SUZUKI renders unpatentable the combination of features recited in at least dependent claim 11.

**REJECTION OF DEPENDENT CLAIM 12 UNDER 35 U.S.C. § 102 IS IN ERROR**

The rejection of claim 12 under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,190,125 to SUZUKI is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Dependent claim 12 depends from claims 1, 2, 4 and 6, and further recites, *inter alia*,

... wherein the valve portion is slidably fitted on an inner circumferential face of the valve cylinder ..."

Again, SUZUKI does not disclose this feature. Fig. 6 of the instant application shows valve portion 34a slidably fitted via seal 37 on the inner circumferential surface of the valve cylinder 10. SUZUKI, in contrast, shows no sliding contact or engagement between the valve portion 22 and valve cylinder 18a (see Fig. 5). Nor has the Examiner demonstrated otherwise.

Because the above-noted document fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper reading of SUZUKI renders unpatentable the combination of features recited in at least dependent claim 12.

**REJECTION OF DEPENDENT CLAIM 16 UNDER 35 U.S.C. § 102 IS IN ERROR**

The rejection of claim 16 under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,190,125 to SUZUKI is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Dependent claim 16 depends from claim 1 and further recites, *inter alia*,

... a cylindrical connecting portion of a front valve holder is engaged with an outer circumference of an engaging portion of a rear valve holder of the pair of valve holders.

SUZUKI does not disclose this feature. Fig. 6 of the instant application shows the cylindrical connecting portion 35Ac of front valve holder 35A engaged with an outer

circumference of engaging portion 35Bc of rear valve holder 35B. SUZUKI, in contrast, places valve holder 131b behind valve holder 131a and therefore valve holder 131b cannot be characterized as the front valve holder. Furthermore, valve holder 131b does not have a cylindrical connecting portion, much less, one that is engaged with an outer circumference of engaging portion of valve holder 131a (see Fig. 5). Nor has the Examiner demonstrated otherwise.

Because the above-noted document fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper reading of SUZUKI renders unpatentable the combination of features recited in at least dependent claim 16.

**REJECTION OF DEPENDENT CLAIM 18 UNDER 35 U.S.C. § 102 IS IN ERROR**

The rejection of claim 18 under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,190,125 to SUZUKI is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Dependent claim 18 depends from claims 1, 16 and 17, and further recites, *inter alia*,

... the connecting portion is engaged with the valve cylinder.

SUZUKI does not disclose this feature. Fig. 6 of the instant application shows the cylindrical connecting portion 35Ac of front valve holder 35A engaged with an inner circumferential surface of the valve cylinder 10. SUZUKI, in contrast, does not provide for any contact between valve holder 131b and the valve cylinder 18a (see Figs. 4 and 5). Nor

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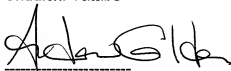
has the Examiner demonstrated otherwise.

Because the above-noted document fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper reading of SUZUKI renders unpatentable the combination of features recited in at least dependent claim 18.

#### **(IX) CONCLUSION**

Each of claims 19 and 21 are patentable under 35 U.S.C. § 112 and each of claims 1-19 and 21 are patentable under 35 U.S.C. § 102(b). Specifically, the applied art of record, even if properly combined, fails to disclose, or even suggest, the unique combination of features recited in Appellant's claims 1-19 and 21. Accordingly, Appellant respectfully requests that the Board reverse the decision of the Examiner to reject claims 19 and 21 under 35 U.S.C. § 112 and claims 1-18 under 35 U.S.C. § 102(b) and remand the application to the Examiner for withdrawal of the above-noted rejections.

Respectfully submitted,  
Shuuichi Yatabe



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703-716-1191

Attachments:      Claims Appendix  
                         Evidence Appendix  
                         Related Proceedings Appendix

CLAIMS ON APPEAL

1. (Previously Presented) A vacuum pressure booster comprising:
  - a booster shell;
  - a booster piston accommodated inside the booster shell and partitioning the interior of the booster shell into a front side vacuum pressure chamber communicating with a vacuum pressure source and a rear side operation chamber;
  - a valve cylinder communicating with the booster piston, the valve cylinder including:
    - a valve piston fitted into the valve cylinder to be slidable in a forward and rearward direction of the valve cylinder;
    - an input rod coupling with the valve piston at a front end thereof;
    - a control valve switching communication of the operation chamber with the vacuum pressure chamber and with air in accordance with a forward and rearward movement of the input rod between the valve piston and the valve cylinder; and
    - an input return spring for pushing the input rod backward, and the control valve including:
      - an annular vacuum pressure introducing valve seat formed in the valve cylinder;
      - an atmosphere introducing valve seat formed in the valve piston and arranged inside the vacuum pressure introducing valve seat;
      - a valve body including: an annular attaching bead portion airtightly attached to the valve cylinder; an expansion cylinder portion extending in the axial direction from the attaching bead portion; and an annular valve portion communicating with a forward end portion of the expansion cylinder portion and opposed to the vacuum pressure introducing valve seat and the atmosphere introducing valve seat so as to seat thereon; and
      - a valve spring for pushing the valve portion so as to seat on the vacuum

pressure introducing valve seat and the atmosphere introducing valve seat, wherein a first port communicating with the vacuum pressure chamber is opened on the outer circumferential side of the vacuum pressure introducing valve seat,

a second port communicating with the operation chamber is opened between the vacuum pressure introducing valve seat and the atmosphere introducing valve seat in such a manner that the inner circumferential side of the valve portion is communicated with the atmosphere,

the attaching bead portion is tightly held between a pair of cylindrical holding portions formed in a pair of valve holders attached to the valve cylinder and engaging an inner circumferential face of the valve cylinder,

an annular recess portion and an annular protruding portion of the pair of cylinder holding portions are elastically engaged with each other, and

a diameter of the cylindrical holding portions is smaller than the inner diameter of the valve cylinder.

2. (Previously Presented) The vacuum pressure booster according to claim 1, wherein at least one of the pair of valve holders is engaged on an inner circumferential face of the valve cylinder through a seal member.

3. (Original) The vacuum pressure booster according to claim 1, wherein a cylindrical connecting portion engaging with an outer circumferential face of one valve holder having the holding portion for holding an inner circumferential face of the attaching bead portion is integrally formed in the other valve holder having the holding portion for holding an outer circumferential face of the attaching bead portion.

4. (Original) The vacuum pressure booster according to claim 2, wherein a cylindrical connecting portion engaging with an outer circumferential face of one valve holder having the holding portion for holding an inner circumferential face of the

attaching bead portion is integrally formed in the other valve holder having the holding portion for holding an outer circumferential face of the attaching bead portion.

5. (Previously Presented) The vacuum pressure booster according to claim 3, wherein the annular recess portion and the annular protruding portion elastically engaged with each other are formed on respective engaging faces between the pair of valve holders.

6. (Previously Presented) The vacuum pressure booster according to claim 4, wherein the annular recess portion and the annular protruding portion elastically engaged with each other are formed on respective engaging faces between the pair of valve holders.

7. (Previously Presented) The vacuum pressure booster according to claim 1, wherein the valve portion is slidably fitted on an inner circumferential face of the valve cylinder,

a forward annular chamber and a rear annular chamber are formed in the valve cylinder,

the forward annular chamber is communicated with the first port and the rear annular chamber is communicated with the second port,

the forward annular chamber is closed by a front face of the valve portion when the valve portion is seated on the vacuum pressure introducing valve seat, and

a back face of the valve portion is facing to the rear annular chamber.

8. (Previously Presented) The vacuum pressure booster according to claim 2, wherein the valve portion is slidably fitted on an inner circumferential face of the valve cylinder,

a forward annular chamber and a rear annular chamber are formed in the valve



cylinder,

the forward annular chamber is communicated with the first port and the rear annular chamber is communicated with the second port,

the forward annular chamber is closed by a front face of the valve portion when the valve portion is seated on the vacuum pressure introducing valve seat, and a back face of the valve portion is facing to the rear annular chamber.

9. (Previously Presented) The vacuum pressure booster according to claim 3, wherein the valve portion is slidably fitted on an inner circumferential face of the valve cylinder,

a forward annular chamber and a rear annular chamber are formed in the valve cylinder,

the forward annular chamber is communicated with the first port and the rear annular chamber is communicated with the second port,

the forward annular chamber is closed by a front face of the valve portion when the valve portion is seated on the vacuum pressure introducing valve seat, and a back face of the valve portion is facing to the rear annular chamber.

10. (Previously Presented) The vacuum pressure booster according to claim 4, wherein the valve portion is slidably fitted on an inner circumferential face of the valve cylinder,

a forward annular chamber and a rear annular chamber are formed in the valve cylinder,

the forward annular chamber is communicated with the first port and the rear annular chamber is communicated with the second port,

the forward annular chamber is closed by a front face of the valve portion when the valve portion is seated on the vacuum pressure introducing valve seat, and a back face of the valve portion is facing to the rear annular chamber.

11. (Previously Presented) The vacuum pressure booster according to claim 5, wherein the valve portion is slidably fitted on an inner circumferential face of the valve cylinder,

a forward annular chamber and a rear annular chamber are formed in the valve cylinder,

the forward annular chamber is communicated with the first port and the rear annular chamber is communicated with the second port,

the forward annular chamber is closed by a front face of the valve portion when the valve portion is seated on the vacuum pressure introducing valve seat, and a back face of the valve portion is facing to the rear annular chamber.

12. (Previously Presented) The vacuum pressure booster according to claim 6, wherein the valve portion is slidably fitted on an inner circumferential face of the valve cylinder,

a forward annular chamber and a rear annular chamber are formed in the valve cylinder,

the forward annular chamber is communicated with the first port and the rear annular chamber is communicated with the second port,

the forward annular chamber is closed by a front face of the valve portion when the valve portion is seated on the vacuum pressure introducing valve seat, and a back face of the valve portion is facing to the rear annular chamber.

13. (Previously Presented) The vacuum pressure booster according to claim 1, wherein the cylindrical holding portions are positioned away from a valve cylinder wall to hold the attaching bead portion away from the valve cylinder.

14. (Previously Presented) The vacuum pressure booster according to claim 1, wherein the annular valve portion faces in a forward direction and is integrally formed

with the expansion cylinder portion.

15. (Previously Presented) The vacuum pressure booster according to claim 1, wherein a cylindrical connecting portion of a front valve holder is integrally connected with a flange portion of the front valve holder.

16. (Previously Presented) The vacuum pressure booster according to claim 1, further comprising a cylindrical connecting portion of a front valve holder is engaged with an outer circumference of an engaging portion of a rear valve holder of the pair of valve holders.

17. (Previously Presented) The vacuum pressure booster according to claim 16, wherein the annular recess portion and the annular protruding portion are formed in engaging faces of a connecting portion and the engaging portion of the front valve holder and the rear valve holder, respectively, of the pair of valve holders.

18. (Previously Presented) The vacuum pressure booster according to claim 17, wherein the connecting portion is engaged with the valve cylinder.

19. (Previously Presented) A vacuum pressure booster comprising:  
a booster shell;  
a booster piston inside the booster shell and partitioning the interior of the booster shell into a front side vacuum pressure chamber communicating with a vacuum pressure source and a rear side operation chamber;  
a valve cylinder communicating with the booster piston, the valve cylinder including:  
a valve piston fitted into the valve cylinder to be slidable in a forward and rearward direction of the valve cylinder;

an input rod coupling with the valve piston at a front end thereof;  
a control valve switching communication of the operation chamber with the vacuum pressure chamber and with air in accordance with a forward and rearward movement of the input rod between the valve piston and the valve cylinder; and

an input return spring for pushing the input rod backward, and the control valve including:

an annular vacuum pressure introducing valve seat formed in the valve cylinder;

an atmosphere introducing valve seat formed in the valve piston and arranged inside the vacuum pressure introducing valve seat;

a valve body including: an annular attaching bead portion airtightly attached to the valve cylinder; an expansion cylinder portion extending in the axial direction from the attaching bead portion; and an annular valve portion communicating with a forward end portion of the expansion cylinder portion and opposed to the vacuum pressure introducing valve seat and the atmosphere introducing valve seat so as to seat thereon; and

a valve spring for pushing the valve portion so as to seat on the vacuum pressure introducing valve seat and the atmosphere introducing valve seat,

wherein a first port communicating with the vacuum pressure chamber is opened on the outer circumferential side of the vacuum pressure introducing valve seat,

a second port communicating with the operation chamber is opened between the vacuum pressure introducing valve seat and the atmosphere introducing valve seat in such a manner that the inner circumferential side of the valve portion is communicated with the atmosphere, and

the attaching bead portion is tightly held between a pair of cylindrical holding portions formed in a front valve holder and a rear valve holder, the front valve holder

including a connecting portion that extends into a recess of the rear valve holder having a forward facing open end, whereby the connecting portion is positioned between the valve cylinder and an engaging portion of the rear valve holder.

21. (Previously Presented) The vacuum pressure booster according to claim 1, wherein the pair of cylindrical holding portions comprise an annular recess having an open forward end and an annular protruding portion extending rearward into the annular recess from the open forward end, and wherein the annular recess and the annular protruding portion comprise inner and outer circumferential surfaces which engage each other.

EVIDENCE APPENDIX

This section lists evidence submitted pursuant to 35 U.S.C. §§1.130, 1.131, or 1.132, or any other evidence entered by the Examiner and relied upon by Appellant in this appeal, and provides for each piece of evidence a brief statement setting forth where in the record that evidence was entered by the Examiner. Copies of each piece of evidence are provided as required by 35 U.S.C. §41.37(c)(ix).

NO.	EVIDENCE	BRIEF STATEMENT SETTING FORTH WHERE IN THE RECORD THE EVIDENCE WAS ENTERED BY THE EXAMINER
1	N/A	N/A

RELATED PROCEEDINGS APPENDIX

Pursuant to 35 U.S.C. §41.37(c)(x), copies of the following decisions rendered by a court of the Board in any proceeding identified above under 35 U.S.C. §41.37(c)(1)(ii) are enclosed herewith.

NO.	TYPE OF PROCEEDING	REFERENCE NO.	DATE
1	N/A	N/A	N/A